RISK IN E-COMMERCE - AN ASSESSMENT OF BUYERS PERCEPTION IN SELECTED CITIES OF INDIA

Synopsis

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INTRODUCTION

The term "buying and selling of information, products, and services using computer networks" is used to describe electronic commerce. Online shopping is a form of electronic commerce in which clients work with e-vendors directly to purchase goods or services from an online retailer. Despite the expansion, it is necessary to acknowledge that the Indian e-commerce market is still trying to find its niche. The technology acceptability curve for the sector is still in its infancy. In terms of its acceptance in large cities as well, there are significant variations. The perception of danger that consumers have when making an online purchase of any good or service is what is causing the e-commerce sector's relatively modest growth. Marketers need to comprehend difficulties associated to perceived risk and delicately address this sensitive topic in order to seize the untapped possibility of e-commerce in the Indian market. E-commerce is still a young business in India. When it comes to ordering or making payments, Indian customers are still at the beginning of the digital learning curve. The majorities of consumers, particularly those in urban and metropolitan areas, is uncomfortable making online purchases and see it as a risky move because there is no actual party to deal with in the event of a dispute. Indian customers also appraise a variety of different risks. Marketers must be sensitive to issues surrounding e – commerce risk in order to manage this delicate topic sensitively and seize the untapped possibility of ecommerce in the Indian market.

SCOPE OF E- COMMERCE

Incredible development is taking place in India. Digital India is the new name for India. The most popular means of connecting to individuals throughout the world for the current generation are digital services. In comparison to traditional commerce, e-commerce allows for the electronic exchange of goods, money, and information between computers. This includes information used for marketing, discovery, transaction processing, product and customer service processes, intranet and extra-net access, and custome collaboration. Selling to international clients, finance and insurance, business transactions, product service and maintenance, usage of both public and private services, business to administration, transport and logistics, and automated trading of digital items are all possible. The informational impact of the digital revolution the nation's social infrastructure is gradually being

transformed by society for its socioeconomic development and as a means of integrating itself into the global networked digital economy. E-commerce is a phenomenon that is fundamentally changing how trade operates. It is the transfer of goods and services over digital networks. There is no longer a need for actual currency to do business because everything is done online. These functions are all performed which is known as true E in e-commerce. (Financial transaction, Advertising, Education and training, Entertainment, Product demonstrate Bill payment etc).

❖ **E- EDUCATION**

Tremendous changes will be made in education as well. There is an almost insatiable demand for training at all levels, including post-graduate, under-graduate, and technical education, as a result of the growing need for professional and qualified IT professionals who possess both creative and technical talents. Institutions are responding by introducing specialized programmers, degrees, and certifications at the university and, particularly, on further. Numerous academic institutions are already under pressure to secure corporate money to cover the vacuum created by decreasing levels of government assistance. Moreover, the rapidity of development and the reactive character of many of these products imply that what has been taking place is more of a promotional campaign than a teaching endeavor.

❖ **E- COMMERCE FOR EMPLOYMENT OPPORTUNITIES**

Although there are numerous debates surrounding the unheard-of expansion of e-commerce and the contribution it is making to the nation's economic development, its potential to generate job opportunities is rarely brought up. The impact of e-commerce on employment possibilities is concentrated on how the Indian employment landscape is affected both intrinsically and extrinsically by that of the e-tail sector andthe economy that surrounds it. The potential benefits of these job prospects are also highlighted, including the evolution of better livelihood modeling techniques, skill reinvention, and the creation of a mutually beneficial relationship to key government interventions.

❖ **E – COMMERCE FOR ECONOMIC DEVELOPMENT**

One way to think of electronic commerce is as a collection of metrics for the realization of goods and services. The sole difference between digital commerce and classical trade is that simply the exchange

of things occurs here. This is a sophisticated continual sequence of observations that are made at various stages of commercial processes. The internet offers a variety of commercial services, including economic, instructional, tourism, and scientific services. The investment, which includes the industries of digital purchases, online insurance, and online trade, is one of the categories of digital services that are growing the fastest. E-commerce is significant from the standpoint of economic and social development since, in opposed to previous trade, it is quick, simple, and accessible to all people. Because of this, there is a sharp increase in revenue.

❖ **E- COMMERCE FOR E- GOVERNANCE**

From the perspective of surveillance and continuously changing environment during communication across the Internet, any type of digitized information is being at risk. To enable the successful operation of e-government, the relevant authority must impose Security, Authenticity, Non-Repudiation, and Authorization of Data to guarantee the effective operation of e-government. The information's privacy is seriously violated when accessed by an unverified user. Either aggressive cyber crime or detached hacking result from this vulnerability. The hacker simply responds to the data when hacking passively. In contrast, proactive stealing involves the attacker listening and altering the information as needed, thus subsequently compromises the information's authenticity.

Breach of online security -E-commerce companies are susceptible to cybercrime and web security lapses. There still are lots of criminals who can get into a company's network and access private data. Your e-commerce website's security must be exceedingly strong as a result.

❖ **Customer complaints and return -** Being able to request credits for contested transactions is one of the main issues with buying online in the electronic-commerce sector. The majority of the time, a conflict occurs when a customer's account has been debited for a commodity which never comes.

❖ **Intellectual property breach-**These are some of the frequent security issues to e-commerce businesses is the infringement of intellectual property. In the e-commerce sector, Protection of Intellectual property is crucial and covers things like webpage logo, information, slogans, goods, as well as other visuals and trademarks.

❖ **Fraud with credit and debit cards-** E-commerce businesses frequently faces dangers including

suspicious transactions and credit card numbers theft. Anyone can open an appropriate purchase using a credit or debit card, including cybercriminals. The website's protection needs to be robust and tight enough to detect a suspicious transfer.

❖ **Ineffective service to client**- It has numerous flaws, including your poor and nasty customer service representatives to outdated logistics operations. Customers may get quite dissatisfied with inadequate service to customer or incidents. It may gradually harm your corporation.

❖ **Unreliable methods of authentication**- It is possible for this information to be stolen if you just utilize a Username and password to verify the user. You are much more susceptible to attacks if your security procedures are rudimentary and insufficient. For your online security to be effective against threats, you require secure authentication techniques.

TYPES OF RISK IN E- COMMERCE

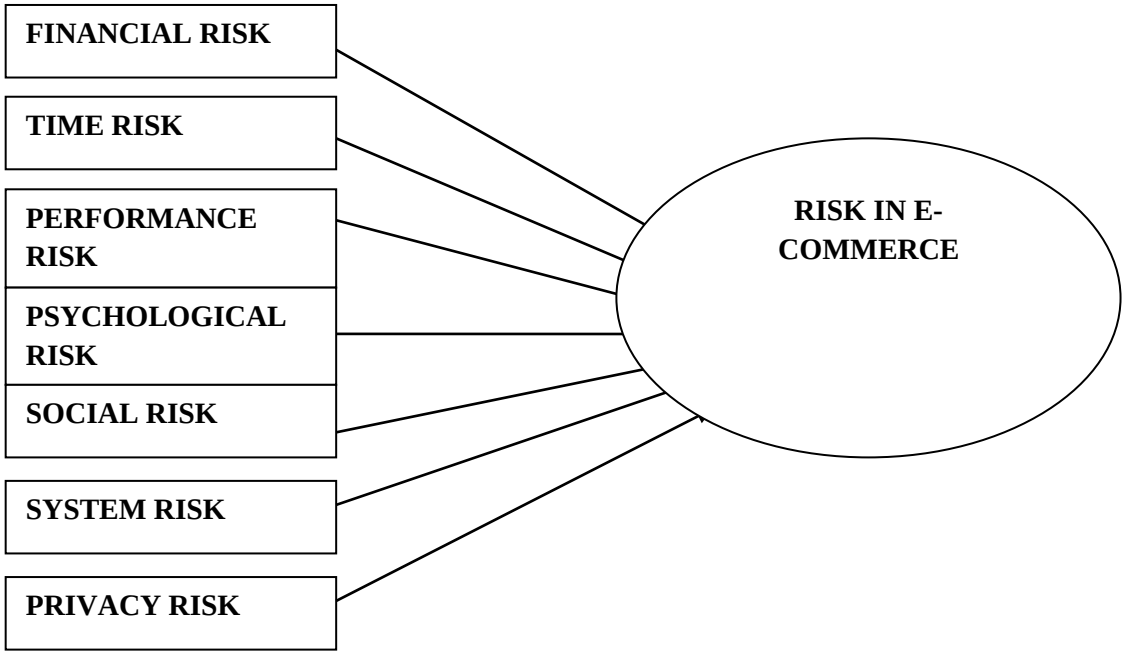

Figure 1 Types of Risk in E- Commerce

1. Financial risk- Economic risk refers to the prospective cost of the product's original purchase price as well as ongoing maintenance expenses. By incorporating information about financial fraud, this study broadens the definition of financial risk. The main perceived risk when interacting is financial risk.

2 **Time risk-** Consumers must go through a number of processes when selecting the best goods or

services, starting with the requirement definition, followed by substitute identification and appraisal, and finally, the buying intention and instruction in product use. Every incorrect decision is a time-waster, and this includes having to restart the entire payment procedure and re-learn about services and goods. Time risk in the context of online shopping also refers to delayed product delivery.

3. Performance risk- When making an online purchase, consumers frequently worry about how the item will be delivered. Transportation shows there is a significant financial loss that customers could experience as a result of late, lost, or defective deliveries. Consumer perceptions about online purchase were found to be negatively impacted by non-delivery risk.

4. Psychological risk- This risk alludes to the possibility that the product's choice or functionality will have a detrimental impact on the consumer's mental health or sense of self. It may also include prospective ego damage brought on by the disappointment of failing to meet a purchasing objective. This psychological danger in e-commerce takes the shape of unsolicited calls, texts, and emails that interrupt the customer's mental tranquilly and comfort.

5. Social risk- The idea that a product purchase can cause family or friend criticism is referred to as social risk. Additionally, it alludes to the potential loss of status within the user's friend network as a result of either the product's offensiveness or the internet as a means of buying being viewed negatively. Embracing a product or service could result in one losing standing in their social circle, appearing dumb, or both.

6. System risk- This risk is connected to a malfunctioning system (computer system, laptop, or Smartphone) as a result of transmission of the virus via ads. This risk also includes financial loss brought on by a site's technical malfunction during internet banking.

7. Privacy risk- Security flaws put buyers' personal and financial details in extreme danger, increasing their risk of data breaches and other financial losses. Online shoppers become more vulnerable as a result of using digital wallets and verifying the validity of confidentiality laws.

REVIEW OF LITERATURE

- **Based on financial risk**

1. **According Rohit Vishwakarma (2021) Study the impact of financial risk involved in online**

shopping and its impact on consumers purchase intention with special reference to Uttar Pradesh. Throughout this article, an effort has been made to conduct research on consumers' internet shopping behaviors. This study report has give insight on the monetary risk involved in online shopping and its varied effects on consumers' purchasing decisions. The current study has demonstrated a significant impact of economic risk on consumers' purchase behavior and also takes into account how negatively it affects consumers' purchase intentions. The shoppers in the current study came from 5 main cities in the state of Uttar Pradesh.

2. **Anam Bhatti ,Hamza Akram (2020) Effect of Financial Risk, Privacy Risk and Product Risk on Online Shopping Behavior** This study aims to investigate the effects of product, privacy, and financial risks on consumers' online purchase decisions. The current study model was created using theoretical foundations. Although the majority of other studies found a negative correlation between risks and online shopping activity, this study likewise shows that detrimental influence. The study provides further information on how dangers can be reduced while enhancing online buying behavior. This information can be used to improve the plan. According to the current study, there are a number of key elements that influence consumers' online shopping decisions. By reducing these risks, we may dramatically raise the percentage of earnings from online channels.

3. **Thandava K. Murthy (2017) a study of financial risk and benefits of online shopping by the customers** Examining the relationship between customers financial risk and the benefits of online shopping is the aim of the study. However, this field has undergone singnificant remodeling over the past few years, which has enthralled many tourists. Along with Amazon.com,other online e commerce portals include Mydala, Deals etc. Money can be lost by taking financvial risk , Chinese consumers online group purchases that an arranged by institutions initiators are analysed to establish how trust, degree of risk , and claimed reward affects Chinese customers. Along its reserah objectives are the exploration and descriptionof the current study .online shopping according to the resaserch analysis offer both benefits and drawbacks .even clients shop online , but because to the unpredictability there arre no instrinsic rewards .online shoppers should be on the alert for bogus online shopping apps that boast extravagant discounts because their devices are particularly vulnerable through a multitude of

channels , smart phones owners need to use a lot more caution .

4. **Moudi Almousa (2014) The Influence of Risk Perception in Online Purchasing Behavior: Examination of an Early-Stage Online Market** The study looks into how Saudi Arabian customers' perceptions of danger when shopping online affect the uptake of e-commerce. For this study, the Technology Acceptance Model (TAM) (Davis, 1989) is used as a framework for comparison in order to predict attitudes toward online shopping and intentions to make purchases online in a developing market. Six categories of risk dimensions—financial, social, performance, time, psychological, and privacy risks—were examined. Consumers considered performance and financial risks to be the next two most important risk factors affecting online shopping, after privacy and psychological concerns.

5. **Zhao Hong, LiYi's (16 March 2012) Research on the Influence of Risk in Consumer Online Purchasing Decision.** The perception of risk plays a significant role in influencing consumers' decisions to make purchases while shopping online. By using the theories of risk, consumers can clearly identify the steps in the shopping process that pose the greatest risk and learn how to avoid them. This process also builds consumer confidence, lowering their perception that the risk corresponds to their feelings. As a result, the essay has significant and practical implications for the future development of electronic commerce. First, look into, gather, organize, and evaluate the information from the questionnaire to obtain the raw data. Finally aim to figure out the influence of risk to each stage of purchasing decision throughout customer on-line shopping process with data and personal analytical. The paper is a complement to the local and current theories. The outcome of the study exhibits that, the order of key risks which felt by consumer throughout on-line shopping process are as follow: financial risk, the performance risk and service risk.

6. **Bo Dai (2007) The impact of online shopping experience on risk perception and online purchase intentions: The moderating role of product category and gender.** This study looked into how consumers' prior online shopping experiences affect how they view the potential risks to their privacy, finances, and products when buying online. As antecedents of online purchase intentions, the three categories of risk perceptions and consumers' prior online purchasing experiences were looked at. This study looked at the relationships between male and female online shoppers for various online

product categories and provided a conceptual model that demonstrates the links between the variables. R The primary study's findings shed light on the connections between customers' prior online shopping experiences, the three categories of risk perceptions, and their intended purchaseintents. Results showed that while purchasing music and clothes online, men felt larger levels of privacy threats than women did. It seemed that guys shopped for clothing online.

7. **Based on Sunita Guru. Vipul Patel, Jitendra Nenavani Bhatt, Nityesh (2020) Ranking of alleged risks associated with online buying.** The expansion of e-Commerce is hampered by hazards. Three significant categories of risks are identified in this study: unintended effects, investment risk, and time-loss risk. This study confirms the predefined scale of risk and tests its applicability in the Indian setting using confirmatory factor analysis. This study uses an analytical hierarchy technique to rank the three hazards described above in order of importance and resolve the multi-criteria decision-making conundrum (AHP). The results show that in order to increase an e-Commerce company's top line and bottom line, management must focus on the top-ranked risks of performance risk and financial risk. The amount of risk for specific B2C e-Commerce brands is also suggested by the AHP approach.

- **Based on Performance Risk**

3 **Shruti thakur (2018) factor affecting online consumer behavior towards shopping**. The key factors influencing how to people shop online are e commerce companies, which use social media as a hub for marketing and advertising. In the extremely competitive business world of today, the most significant and crucial factor are analyzed. Online customers run the risk of making unintended consequences from their purchasing decision. They have an effect on online consumer behavior because they discourage people from making purchases due to concern about delivery, healthcare, finance, and other danger. Businesses can also work to improve their websites, corporate profile, and brand reputation when it comes to onine shopping by monitoring customer behavior.

4 **Dr. Smita Mishra and Ms. Nishi kakkar (2021) Literature Based Analysis of Risk Perception of Consumers in E commerce: A Study of Online Buying Behavior** Despite the growth of electronic commerce (e-commerce), only a small portion of retail sales are made online. Risk is one of

the elements influencing online shoppers' purchasing intentions. Therefore, it is necessary to comprehend how risk perceptions and attitudes are held by online consumers in order to reduce it. Understanding and predicting how people will respond to the risk posed by online hazards is challenging. As a result, this research endeavor uses a literature review to investigate how consumers experience danger when shopping online.

5 **Omar Masood, Fernando Garcia (2020) Strategies to manage the risk faced by consumer in developing e commerce** The research aims at how risk is managed in e-commerce and what obstacles consumers may encounter in a dangerous or uncertain situation. Different risk factors have an impact on how consumers who shop online behave while making purchases. The secondary data includes an analysis of the numerous consumer behavior theories, adoption models for the internet, risk factors for online marketing and shopping, and adoption models for new forms of innovation and commerce. Both methodologies are used to investigate the connection between perceived risk management practises and customer happiness as well as consumer involvement and risk-taking propensity in the context of the current online shopping relationship.

6 **Sumit Chaturvedi (2016) Risk, Trust and Information Seeking Behavior as Antecedents of Online Apparel Buying Behavior in India: An Exploratory Study in Context of Rajasthan** Because buyers in a developing nation like Rajasthan are typically risk-averse, marketers and researchers are particularly interested in how social media affects consumers' online purchasing behavior. Information seeking, online e-commerce risk, and trust were the main motivators for customers to buy clothes online through social media. According to empirical research results from an SPSS 22 analysis, social media may have a moderate to large impact on Rajasthani consumers' online garment purchasing decisions. Trust is the factor which is most significantly impacted, next by risk and decision making.

7 **Ramakrishnan Ramanathan (2011) An empirical analysis on the influence of risk on relationships between handling of product returns and customer loyalty in E-commerce** We investigate how risk features of items affect the links between performance of businesses in managing product exchanges and customer loyalty using data from online customer rating. Research that used

data from online ratings, studies that employed operational elements (particularly those linked to product returns) to shape customer loyalty, and studies of risk and consumer behavior in an e-commerce setting. Our findings indicate that consumer retention for high-risk and low-risk products, compared to products with medium degrees of risk, is significantly influenced by how returns are handled. The creation of opposite way channels in online supply chains as well as website management must consider the ramifications of these findings.

- **Based on psychological risk**

13 Yi Sun (2022) The Impact of Risk-Aware Consumer Trust on CB E-Commerce Platforms and Purchase Intention Due to its wide selection, easy operation, and lack of time and space constraints, cross-border e-commerce (CBRC) is having a rising impact on the value of traditional trade. It has also transformed consumers' shopping patterns. However, there are still numerous issues with CBEC's development, and as a result, domestic customers are not very keen to use CBEC platforms. The research topic of this paper is the impact of customer trust on purchase intention based on perceived risk of CBEC platforms, taking into account the aforementioned background information. The findings indicate that when the exploration value in perceived promotional benefits is high, it would put customers in an illogical state and diminish the perception of danger, according to the regression results of the five aspects of trust on purchase intention.

14 Ruhani Bahl and Subodh Kesharwani, 2020. Impact of risk and trust on online shopping behavior: A study from Indian perspective, According to a Statists Research Center analysis, there will be a change in consumer behavior; in India, there will be around 160 million online customers annually in 2020 as opposed to 135 million in 2019.The two main factors that influence consumers' attitude while purchasing online, in addition to the other factors, are perceived risk and trust, according to earlier studies. This paper's purpose is to comprehend and assess the effects of risk and trust on internet purchasing behavior out of an Indian viewpoint. This research is based on the results of a main online survey, and the hypothesis was tested using structural equation modeling. According to the investigation, Trust and Online Shopping Behavior are negatively impacted by Risk. Additionally, trust has a favorable impact on consumers' online sales habits.

15 Christian D. Pentz claims (2020) To bu(Y) or not to bu(Y): Risk barriers to online shopping among South African generation Y consumers. The adoption and expansion of online commerce are somewhat modest in South Africa. This study's main goal was to look into any risk barriers that might affect how South African consumers in the Generation Y demographic shop online. Both seasoned and novice online shoppers were taken into account. The findings demonstrate that psychological risk and social risk (both merchant reputation and social influences), for apparel and books, were the characteristics of risk that exhibited significant connections with experienced online customers' propensity to make additional purchases online.

16 Prisana Kumpusiri and Somjate Waiyakarn (2019) Consumers Perceptions towards Buying Evaluation and Risks of E-Commerce Products: A Study on Influencing Factors Online vendors must comprehend customer attitudes and perceptions. The purpose of this study was to pinpoint the variables that affect customers' attitudes toward internet buying. The results were collected via a questionnaire, tallied, analyzed, and distributed appropriately. First, it must comprehend the attitudes and behaviours of its target clients when it comes to online shopping. Therefore, this study clarifies attitudes toward many aspects of online shopping and gives both producers and academics a greater grasp of the possibilities of e-commerce. According to the study's findings, customer attitudes regarding appraisal, purchasing, and risk are statistically significant.

17 According to Stephanie C. Kozina (2012) Understanding the Relationship of Trust and Risk in Online Shopping. The relationship between online shopping, risk, and vendor trust is examined in this study. In earlier literature, various models have been put out and investigated. To clarify how these three constructs relate to one another, this study examined three models: Through, Joint, and Plus. The four forms of risk identified by a main components factor analysis were privacy, time, social, or lost resource risk. All four were taken into consideration in the analysis. All four key areas models were evaluated using structural equation modeling. The findings indicate that, from an empirical standpoint, associated with the following Framework which risk influences trust and trust affects shopping—is the greatest fit. Predictability and two different categories of risk, including secrecy and duration, were found to be related.

18 Based on Saranya and Chandran (2017) A study of risk and threat in online shopping with special reference to consumer perception and behavior in Chennai city. The goal is to investigate how consumers risk in online transactions and to assess the numerous dangers that consumers may perceive as risks. Primary data are used to gather the source of the information, and direct structured questionnaires are also used. The size of the sample is the quantity that will be chosen from the universe to make up the sample. 200 respondents from diverse areas of Chennai city make up the sample size for this study. In this investigation, random sampling was the type of method. The chance of each and every population item being selected for the sample is equal. In this essay, an effort has been made to look at the variables that individuals regard as risks while buying goods or services online.

19 R. Kumar and Mahmud Al Kailani (2011) claim that A study in three national cultures looked into how uncertainty avoidance and risk affected online purchasing. This study looks into the elements that influence online shopping in three different cultures: Jordan, India, and the United States. There has been relatively little study that examines the elements that vary between national cultures, despite the fact that a number of consumer characteristics that influence online shopping have been investigated in the past. Global markets are accessible through online shopping and trade, and many businesses rely on them for expansion and growth. Therefore, it is crucial to comprehend the specifics of how variations in consumer traits affect online shopping across various nations and cultures. The impact of consumer traits like uncertainty avoidance and risk on online purchases is tested in this paper's empirical investigation. Data from the USA, Jordan, and India were gathered and examined. The findings indicate that risk associated with online purchases is equally high in cultures where there is a considerable tendency to avoid ambiguity. Negative effects on online shopping are shown in cultures where perceived risk is high. The findings have ramifications for how web-based businesses might appeal to consumers in various cultures, according to the results.

20 Manmohan Rahul and Nupur Arora (2018) The impact of risk on Indian women's attitudes about online buying. The goal of this study is to investigate the main elements of risk in e-commerce (security risk, privacy risk, product risk, and semi risk), as well as the influence of risk on

online shoppers' attitudes among Indian women. It offers a model that explains how the perception of risk in online purchasing affects attitude and also how attitude toward online shopping affects intention to shop online. Internet users who had previously conducted online purchasing were given a questionnaire. The validity and composite reliability of the research constructs were assessed using confirmatory factor analysis. The study's findings show that the attitudes of Indian women shoppers are not significantly influenced by risk.

21 An opinion of Sumit Chaturvedi Gupta, Sachin Devendra , Singh Hada (2016) An Exploratory Study in the Context of Rajasthan. Risk, Trust, and Information Seeking Behavior as Antecedents of Online Apparel Buying Behavior in India. The increased usage of social media is altering consumer purchasing habits globally. The impact of social media on consumer online buying behavior, however, is a vital point of research to practitioners and researchers because consumers in a fast - growing world like Rajasthan are typically classified as risk averse. There is relatively little empirical study data in this field. According to empirical research results from an SPSS 22 analysis, social media may have a moderate to large impact on Rajasthan consumers' online garment purchasing decisions. Trust is the factor that is most greatly affected, followed by risk and information seeking.

- **Based on social risk**

22 Kunal Lal and Ashmita Chand claims (June 14th 2021) Consumer Perception of Electronic Commerce: Using the Technology Acceptance Model to Include Trust and Risk. The surge in internet users gives the prospect of Electronic Commerce, the idea of delivering and accessing goods and services via internet, such as selling goods and services, executing financial transactions and even making an appointment. Numerous information systems research studies have used the two main theories ease of use and usefulness—to better understand how consumers behave in e-commerce settings. This paper integrates the findings of earlier researches with the risk of trust and danger of consumers to create a comprehensive framework of online buying behavior based on the Technology Acceptance Model. An online survey with questions focusing on these disciplines was utilized to get a thorough knowledge of customers' approval of e- commerce. The results of which confirmed that

there were relationships between e-commerce usage and perceptions of trust, risk, usability, and convenience of use. Businesses in Fiji may utilize this information to add features that meet consumer expectations and have a solid foundation before entering the e-commerce market.

23 Marco G. Mariani, Salvatore Zappalà (2006) Risk Perception in Online shopping in this process of environmental adaptation, the perception of risk is crucial. The social pressure that friends and family of consumers apply through critical remarks and opinions is the root of the risk in online shopping. The relationship between trust, risk perception, and the intention to make an online transaction is the chapter's main topic. It investigates how trust and e - learning self impact risk perception. In studies on financial and economic decision-making conducted in the 1920s, the idea of risk was first applied in scientific study. Despite the apparent advantages of online purchasing, many customers are still hesitant to embrace e-commerce, probably because some believe the risks are higher than any potential advantages.

- **Based on system risk**

24 According to Nawaf N. Hamadneh and Sufyan Habib (13 September 2021) Impact of Risk on Consumer Acceptance Of technology in the COVID-19 Pandemic Online Grocery Adoption Due to the speedy spread of the COVID-19 pandemic, the development of mobile Internet technology, and consumers' quick adoption of online buying innovations, the e- commerce business has seen extraordinary growth on a worldwide scale. Online shopping has been mandated under the COVID-19 criteria for security, physical separation, closure, lockdown, and other restrictions. The expansion of e-commerce has enabled the grocery (FMCG) sector to adopt cutting-edge technologies like the Internet of Things (IoT), cloud computing, and block chain. In this study, the risk and customer satisfaction are examined in relation to Indian consumers' online purchase intentions for products in the FMCG category. The results showed that the spread of the COVID-19 pandemic had a major impact on Indian consumers' online shopping behaviors. Organizations can better understand the implications of consumer tech uptake, risk associated with online transactions, customer trust in digitally technologies, and consumer desire for online grocery shopping according to the study's findings.

25 Xiaoxue Zhang and Xiaofeng Yu, 29 October 2020 The Impact of Risk on Consumers' Cross-Platform Buying Behavior, On Various hazards associated with online purchasing and customer beliefs have been the subject of a number of prior studies. Although consumers can make direct purchases of goods on information-giving platforms, they also make targeted purchases on other platforms. Concepts including risk, trust, unfavorable press, and cross- platform customer purchasing behavior are conceptualized and put into practice in this study. In terms of consumers' views of the risk of product impacts, consumers' perceptions of service risks, and consumers' perceptions of other risks, a basic description and comparison of consumers' cross-platform buying behavior were made. This leads to a discussion and explanation of the findings, as well as some references for platforms that are relevant. In addition, the study's findings about customer purchasing habits are influenced by how users perceive platform reliability.

26 Shilpi Saxena and Roopam Kothari (2018) online Buying Behaviour and Risk Perception: An Empirical Study. Being integral to our lives is shopping. Customers used to have a propensity of searching an organized retail store or an uncontrolled kirana shop for everything from groceries to gold. Before the advent of online shopping, these were the only possibilities for purchases. Web-based purchasing, sometimes known as online shopping, is a relatively new idea that is rapidly gaining traction among Indian consumers. Risk linked with internet buying systems is one of the drawbacks. This study paper's main objective is to describe respondents' online purchasing habits. Additionally, it makes an attempt to experimentally investigate the variation in online buying behavior based on the risk perception of professionals from the Rajasthan city of Jaipur.

27 According to Stanko Dimitrov, Brian P. Cozzarin (2016) Mobile commerce and risk particular to devices. This study investigates the impact of access device type and risk on customers' online purchasing choices. To estimate customer behavior, we employ a two-step hurdle method. The sample group allows us to analyze sub-samples of people who only use PCs, only use mobile devices, and other users. We demonstrate how price and internet security have a big impact on mobile e-commerce. We also demonstrate that the level of e-commerce interaction varies statistically significantly depending on the type of gadget used and the level of consumer risk. One of our key

conclusions is that purchase decisions are more influenced by risk for mobile users than for PC users, although further compared to a control group using our investigation.

- **Based on privacy risk**

28 Soewarno Noorlailie and Ardhiani Mutiara Rachma (2018) Participation client on e-commerce: relationship risk, security, trust, and consumer protection The goal of this study is to ascertain how risk perception, security, and trust affect Indonesian e-commerce customer involvement. Additionally, this study seeks to determine whether Indonesian state law, specifically the Consumer Protection Act (CPA), might decrease perception of risk and boost customer engagement in e-commerce. 184 respondents who were e-commerce clients participated in this research in Indonesia. Moderated Regression Analysis and the SPSS 23 programme were used for the testing. The findings of this study demonstrate how security and influence factors affect consumer engagement. While the customer's engagement is unaffected by risk. The interplay of the moderation variable of consumer protection on risk perception and trust does not have an impact on the consumer participation, according to another finding of this study.

29 Ms. Palak Gupta (2016) E-Commerce- Study of Privacy, Trust and Security from Consumer's Perspective Internet users' attitudes of the website's information quality, trust, privacy concerns, reputation, security concerns, and the company's reputation all have a significant impact on their willingness to place their faith in it. Privacy and security are two of the most pressing issues facing both online shoppers and merchants. Personal data control is known as privacy, whereas unauthorized people attempting to access data is known as security. Therefore, information security is a crucial technical and managerial need for any efficient and productive money transfer activities online. In order to secure e-commerce commodities against unauthorized access, destruction, alteration, or use, e-commerce security must adhere to five key principles: stability, security, veracity, privacy, and accessibility. This essay will shed light on the privacy, security, and various security concerns associated with online shopping, as well as how these factors influence customer security and purchase behavior.

30 According to Amy I. Wright (2016) Security Risk and Social Presence in E-commerce, the

goal is to look into the connection between customers' perceptions of a store's security and their plans to shop there. Additionally, the impact of social presence on how customers perceive security risk was looked into. According to the results of our study, the perception of security risk and the likelihood of making a purchase are negatively associated; the greater the danger, the less probable it is that a person will intend to make a purchase. The type of store does not affect customers' sense of security or their inclination to make purchases, according to our study's findings. Furthermore, it was not found out that social interaction affected how secure people felt.

31 Smith, Katherine Taken (2011) Consumers perception regarding e commerce and related risk. In addition to examining the importance of e-commerce in the current global economy, this article also identifies e-risk. The importance of e-commerce in the global economy, the development of online enterprises, and the special opportunities it offers to connect advertisers with customers are just a few examples of what makes it valuable. Investigations into cybercrime and the usage of Web assurance services to prevent security breaches are part of e-risk research. We briefly discuss the history of e-commerce in order to comprehend the nature of e-risk. E- commerce growth may be hampered by consumer concerns over online security and privacy hazards. A study was done on e-commerce transactions and the effects of websites displaying Web assurance seals.

32 Neeraj Mathur (2015) Risks toward Online Shopping: An Empirical Study of Indian Consumers,. Digital marketing is poised for a bright future in this quickly evolving world, particularly in India where the service sector is experiencing exponential growth. India's growing internet usage opens up more opportunities for shopping online. Despite this increased application of the internet, a number of factors affect how Indian users react when making purchases online. Additionally, if online shops are aware of these variables, they can expand their prospects and turn passive clients into active ones. The purpose of this research paper is to ascertain how Indian consumers view the hazards online purchases. The misuse of credit cards, the disclosure of employee data, the risk of the products, and the concern of efficiency are the key risks associated with online shopping.

33 Ankit Kesharwani, Shailendra Singh Bisht (2012) claims that the impact of trust and risk on

internet banking adoption in India: An extension of technology acceptance model. To keep current clients and draw in new ones, banking firms should pay much attention to the barriers to or risks associated with the adoption of e - banking. The report also recommends that banks access the website with tools to help people evaluate online banking services. By doing this, they can reduce risk and increase ease of use. This paper's major goal is to broaden the technology acceptance model (TAM) in the perspective of India's acceptance of online banking under the vulnerability of data security. The study finds that risk negatively affects behavioral intentions to adopt bank transfers, and assessed risk negatively affects credibility.

34 Upasana Kanchan (2015) A study of online behavior of customers in India The recent "Big Billion Day" Sale on Flipkart is a good example of how customer buying habits are changing. The advantages of the Internet in offering copious amounts of information rapidly and affordably, as well as its expanding accessibility, can be partly contributed to the development in online commerce. The goal of this study is to comprehend and examine the variables influencing Indian customers' online purchase decisions. The survey asked about consumer demographics, privacy and security concerns, technical proficiency, past online shopping experiences, and future intentions to purchase various products via the internet. The research makes an effort to pinpoint the factors that influence young people's online buying intentions in the context of India. According to the study's findings, a customer's inclination to make an online purchase is significantly influenced by their gender, education level age, security risks, technical comfort, and previous growth of internet purchases.

35 Anthony D. Miyazaki and Ana Fernandez (2001) Consumer Perceptions of Privacy and Security Risks for Online Shopping Information security and privacy have been identified by government and business organisations as important barriers to the growth of consumer-focused e-commerce. Both new and seasoned users of internet technology have been found to have problems with risk perceptions related to privacy and security on the internet. This study looks at how customers with different levels of Internet experience perceive risk and how it affects their online shopping behaviour. Results show correlations between customers' degrees of Internet experience, their use of alternative distant purchase channels (including phone and mail-order shopping), their

perception of the hazards associated with online shopping, and their online purchasing behavior. The consequences for consumer satisfaction and internet commerce are examined.

- **Based on demographic variables**

36 According to Kate Ngobeni and Khathutshelo M. Makhitha (2021) attitudes toward online purchasing are influenced by hazards and demographic considerations. In South Africa, the use of online purchasing has increased (SA). Due to several risks involved in internet purchasing, a sizable majority of consumers continue to avoid doing their shopping there. This is true despite the fact that more South African customers are using the internet and that it is generally available to them. The goal of this study was to identify the risk factors that affect South African consumers' perceptions about internet buying. The study also sought to ascertain whether demographic in South Africa affect customers' risk factors for internet shopping. According to the report, customers' attitudes regarding online buying are more influenced by privacy and security threats. A further finding of the study was that gender had no moderating influence on the association between risks and attitudes toward internet purchasing.

37 V. Shruthi (2018) Consumers Perception towards Online Shopping Platform The purchasing and marketing of services or products over electronics devices like the internet and various computer networks is referred to as electronic commerce, or E commerce. As a result, we have chosen to research consumer attitudes toward online buying and, more specifically, the variables that motivate customers to do so. Our research focused on the demographics of shoppers in Bangalore and the variables that affect fewer pricing, discount, customer feedback, product quality, and shoppers. A successful online business is more than just a well-designed website with cutting-edge functionality that appears in widely used search engines. The purpose of this study is to develop a preliminary analysis, evaluation, and knowledge of online buying characteristics. The investigation of online shopping behavior offers E-marketers with valuable information.

38 Dr. Vinay Kumar (2016) A Study on Risk & Trust in Online Shopping a Comparative Study among Various Demographic Groups E - retailers were effective in building their companies in the eyes of online buyers. The problem of whether men and women trust online purchasing equally

emerges. In the proposed investigation, the researchers looked at respondents' perceptions of dangers and their levels of trust when purchasing online in Pune. Through one way anova (analysis of variance), the privacy risk, which is one component of risk perception, has also been evaluated among some of the three various age groups of the survey participants, and the results demonstrate that there is indeed a substantial difference in misuse of personal information among all three respondent's demographic groups of Pune customers. The findings indicate that male and female shoppers in Pune have equal levels of trust.

39 Ms. Dipti Jain (2014) Consumer Behavior towards Online Shopping: An Empirical Study from Delhi Understanding the variables that influence consumer purchasing behavior can help companies create marketing plans that will turn potential customers into paying customers. In this study, four aspects of online purchasing as practiced by Indian customers are highlighted, and many demographic parameters are also examined. The major goal of this study is to examine the effects of risk, enjoyment, utility, and convenience of use aspects on Delhi customers' online buying behavior. Consumers are discouraged from shopping online by convenience and fun, thus researchers advise businesses to concentrate on risks to win over customers' trust. The suggestions made in this study could support future expansion of internet retailing in India. The study's conclusions showed that risk had a negative influence. The study's findings showed that while convenience, considered usability, and satisfaction had no bearing on customers' attitudes about online purchasing, factors have a significant impact on those attitudes.

- **Based on levels and types of risk and awareness in risk**

40 Subekti Singgih Hadi (2019) Price Perception, Risk, Quality of Information, and It's Effect on Online Purchase Decisions This research aims to see if the decision to make purchases online is influenced by perceptions of price, risk, and information quality. The adjusted R Square, which is equal to 0,58, indicates that the choice to make an online purchase is influenced by perceptions of price, risk, and information quality, according to the study's findings. The impression of cost, danger, and information quality account for 58% of the variance, with the remaining 35% influenced by variables outside the scope of this study.

41 According to Dr. Pawan Kumar and Rakhi Bajaj (2017) Usefulness of Risk Reduction Strategies on Risk Among Students of High Educational Institutes Towards Online Shopping in Punjab The goal of the current study is to determine whether risk-reduction tactics are effective in lowering students at elite higher education institutions in Punjab's perceptions of the danger associated with internet buying. The goals are accomplished with the aid of a restructured questionnaire that uses a five-point Likert scale to measure the impacts on different risk-reduction tactics used by online shoppers in four cities. Subject data are gathered using the convenience sampling method. In this study, statistical methods like mean and standard deviation are applied. The extent of these tactics' influence is also investigated. The study's primary conclusions demonstrate the significant value of risk reduction measures in reducing risk perception for the risk types under examination.

42 Rakhi Thakur (2013) A study on the impact of consumer risk perception and innovativeness on online shopping in India In order to determine how customer innovativeness might be used as a variable to favorably influence e- commerce behavioral intention to adopt both directly and lowering consumer risk, the goal of this article is to build and experimentally evaluate a conceptual model. To create a conceptual model, a comprehensive evaluation of the literature on risk factors and personal proactiveness toward digital technologies was conducted. Results show that consumer innovativeness is a crucial factor in enhancing consumers' desire to adopt online retail, both directly and through its positive influence on how risky consumers perceive utilizing the internet to buy commodities. Studies that link consumer innovation and risk in the context of internet shopping in the Indian situation are scarce.

43 Jayendra Sinha (2012) Factors affecting Indian consumers' online buying behavior Indian consumers are only now starting to comprehend the advantages of online purchasing by examining Indian customers' perceptions of danger when shopping online, this study aims to pinpoint elements influencing Indian consumers' attitudes toward the practise. The constructs tested included previously identified factors (convenience risk, product risk, financial risk, perceived behaviour control, return policy, social norm, attitude, and technology precise proactiveness), as well as factors that were developed specifically for this study in India (concern regarding associated with delivery of a

purchased items and data protection laws, shipping costs, and after service). Mens were shown to be significantly impacted by s (product, convenience, financial, and non-delivery) and digital proactiveness and risk - taking, whereas females were significantly impacted by utility risk and mindset to online buying.

44 Hong-Youl Ha (2002) The Effects of Consumer Risk Perception on Pre-purchase Information in Online Auctions: Brand, Word-of-Mouth, and Customized Information This study looks at how customers' use of information impacts how risky a purchase seems to them. This study focuses in particular on pre-purchase information including brand, word-of-mouth, and personalized information. The findings demonstrate that tailored information and word-of- mouth marketing have a greater impact on consumer behavior than other types of information from online auctions. Because they are grounded in consumer experience and pertinent to product buying, consumers rely on these two elements. Particularly important in lowering consumers' risk in online purchases is information processing related to product performance. The findings shed light on the function of pre-purchase information in management and e-commerce for e-marketers and e-marketing researchers..

45 Amit Bhatnagar (2000) On risk, convenience, and Internet shopping behavior The potential cause could be the risks associated with online shopping. These problems could result from consumers' fears regarding the security of sending credit or debit card information over the Internet. It is widely accepted that the customer maximises his or her utility given time and financial constraints. Considering his limited time and financial resources, a consumer searches for the best solution. According to our theory, different people would take danger to varying degrees. Depending on a person's characteristics and demographics Regular Internet users would be less risk-averse than newcomers to the medium. According to this paradigm, the effects of accessibility and risk on network choice patterns are moderated by individual demographic characteristics. By examining these interactions, we will be able to identify the market segments that exhibit the highest levels of risk aversion toward the Internet.

NEED OF THE STUDY

Now - a -days due to benefits and global reach of e- commerce every sector and individuals are using e – commerce in various capacities. In addition to this government has made digital platform mandatory and has launched campaign like digital India. Moreover, demonetization and contact less transaction during COVID pandemic like factors have fuelled number of e commerce transactions and its total percentage of transactions in economy so **the number of e- commerce is increasing in every type of businesses, but unfortunately there is lack of awareness about the risk associated among the users regarding the risk associated in e commerce, so there are number of customers who are suffering financial or other losses.** Therefore this is alarming situation to perform an analytical study in the area of risk associated in e – commerce transactions. To find out feasible solutions for the same.

GAPS OF THE STUDY

❖ The research is to find out the relationship between risks in e- commerce and demographic factors which are not taken up as research topic yet.

❖ There are few researches regarding awareness level of e commerce but not any in Indian reference of e commerce risk.

❖ In addition to above there is no research on the various types of risk and their levels in e-commerce.

❖ Apart from this, no organized model based on e commerce risk has been developed yet to which can assist customers in analyzing, identifying, or preventing the same.

OBJECTIVE OF THE STUDY

1. To examine the effectiveness of policy and Regulatory Framework of E – Commerce in India.
2. To know the awareness level among e – commerce customers regarding level and types of risk associated in e – commerce transactions.
3. To explore the role of demographic variables in risk of e- commerce transactions in selected cities.
4. To identify the challenges regarding various types of risk and levels in e- commerce.
5. To develop one action plan for resolving the issues related to e- commerce risk have been faced

by consumers in India.

REASERCH DESIGN AND METHODOLOGY

Table 1 Research design and methodology

S.NO	PARAMETERS	DESCRIPTION
1.	**REASERCH DESIGN**	Analytical study
2.	**SAMPLNG METHOD**	Stratified sampling method
3.	**SAMPLE SIZE**	**600 Respondents (On the basis of sample size formulae and Researcher has rounded off 576 responded to 600 responded).**
4.	**SAMPLE ELEMENT**	Respondent(online and offline consumers)
5.	**SAMPLE AREA**	Delhi City, Agra, Firozabad (Taken by city type A, B, C)
6.	**RESAERCH APPROACH**	Websites(sscnasscom.com),Amazon.com, myntraecommerce.com etc), Books ,Journals (Journal of Advances in Information and Technology etc) Thesis, Newspaper (Business Standard, The Economics Times etc), Published records etc.
7.	**REASERCH INSTRUMENT AND CONTACT METHOD**	Questionnaires or schedule interview filled through personal visit to consumers and online survey.
8.	**DATA COLLECTION**	Primary and Secondary data
9.	**DATA ANALYSIS**	Descriptive & Inferential Statistics

DURATION OF THE STUDY

From the year (2019 onwards) will be taken into consideration for the research purpose.

PROFILE OF RESPONDENT ACCORDING TO TYPES OF CITIES

Table 2 Profile of respondent according to types of cities

METROPOLITIAN CITY (TYPE A)	Delhi City
URBAN CITY(TYPE B)	Agra
SEMI – URBAN(TYPE C)	Firozabad

DATA COLLECTION

Primary Data: The primary data will be collected through a well-structured questionnaire from the respondents of selected Cities (Agra, Firozabad, and Delhi).The respondents will be online buying consumers of these selected cities.

Secondary Data: The secondary data will be collected from:

1. Newspapers: Economics Times, Hindustan times etc.

2. Different Researches Published Research Papers, Websites: (sscnasscom.com,

m.economictimes.com, businessstandard.com, Amazon.com, myntraecommerce.com etc), Books, Journals (Journal of Advances in Information and Technology etc), Published Records etc. Thesis, Articles, etc.

SPECIFIC RESEARCH METHODOLOGY

To accomplish objectives of the research the researcher will use the following specific Research Methodology mentioned below in tabular form.

Table.3 Specific research methodology

S.NO	OBJECTIVES	SOURCES	DATA ANALSIS
1	To examine the effectiveness of policy and regulatory framework of E-commerce in India.	Secondary Data	Regression Model
2	To know the awareness among e – commerce customers regarding level and types of risk associated in e – commerce transactions.	Primary and Secondary data	Chi-Square test will be used for analysis.
3	To explore the role of demographic variables in risk of e- commerce transaction.	Primary Data	Regression Analysis correlation and regression analysis will be used for Achieving this objective.
4	To identify the challenges regarding various types of risk and levels in e-commerce.	Primary Data and Secondary Data.	As per the result of the study.
5	To develop one action plan for resolving the issues related to e-commerce risk been faced by consumers in India.	Primary Data	As per result of the study .

Total number of Respondents

This research is a questionnaire and schedule-based survey of the online buying consumer in the selected cities. A structured questionnaire will be designed for collection of data or by observations of some selected cities (In which we have taken A, B, and C Types of cities). A total number of 576 questionnaires will be distributed among the online buying consumer in selected areas randomly.

Table 4 Total numbers of respondend

S. No	District	Total population*	Sample size	Selected sample size (50%)
1	**Delhi City**	32,066,000*	384	192
2	**Agra**	2,314,000*	384	192
3	**Firozabad**	870,000*	384	192

4	**Total**	**35,250,000**	**1,152**	**576**

(Source: Censusindia.gov.in)

To find the sample size for 100000 populations' researcher will calculate the sample size first by calculating it for infinite size and then adjusting it to the required size.

Given: Z score = 1.960, Population Proportion = 0.5, Margin of

Error = 0.05 Using sample size formula,

S (Necessary Sample Size) $=Z^2$

$*P*(1-P)/ M^2$ $S= (1.962)^2*0.5*(1-$

$0.5)/0.05^2$

= 3.8416*0.25/0.0025

S= 384.16

The sample size for the infinite population is 348.16.

PROPOSED CHAPTER PLAN OF THE STUDY

Table 5 Proposed chapter plan of the study

CHAPTER 1	**Introduction**
CHAPTER 2	**Review of Literature & Research Methodology**
CHAPTER 3	**Identify challenges of demographic risk and their role in e- commerce**
CHAPTER 4	**Data Analysis & Interpretation**
CHAPTER 5	**Findings, conclusion & suggestions**
Annexure	**References & Bibliography**
	Appendix

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